

## ABSTRACT

A method and apparatus for applying an application of a data service, such as X.500 and LDAP, to a relational database, a database design and use of the database to perform such directory services. Specifically addressed is the problem of achieving efficient searching of a directory service database coupled with effective input or output of data from the database. The disclosed method and apparatus, which provide end efficiency and data tolerance in the provision of a variety of database services, is based upon the concurrent storage in a database of both a normalised (syntax normalised) form and a raw (protocol encoded) form of the data. The raw form of data may be in ASN.1. A further feature of the disclosed method and apparatus concerns the transfer of data in and out of a database, where, in finding data in the database, a normalised form is used, and, in transferring data out of the database, a raw form is used. Syntax rules are used to convert the raw form of data to or from the normalised form in which it is stored.